

issue 63 dec 2017

The Wonders of Outdoor Education



Big Idea

issn 2010-1031

Outdoor Education for Today's Youth

The great outdoors is not only a place for adventures and exploring what Mother Nature has to offer, it also provides many other benefits to our youth for their holistic development. In this issue's Big Idea, we speak to SingTeach Guest Editor Professor John Wang from the Physical Education and Sports Science Academic Group at NIE, and a group of outdoor educators and enthusiasts. They discuss the importance of helping youth cultivate the love of nature and how to encourage them to get outdoors more often.

Tha National Push for Outdoor Education

In 2016, Minister for Education (Schools) Ng Chee Meng announced that stronger emphasis will be placed on outdoor education in the coming years through the National Outdoor Adventure Education Master Plan, which will make outdoor education compulsory in every Singapore school.

"Outdoor Education is another platform that provides rich learning experiences outside the classroom for building resilience, tenacity and ruggedness in our youth," said Minister Ng in Parliament during the Committee of Supply debate in April 2016 (Ng, 2016).

For many of the outdoor educators we spoke to, this announcement was a welcome one.

Benefits of Being in Nature

"I have always been a strong believer in outdoor education and the need to be close to nature," says Professor Wang. "Nature allows us to rediscover and recharge ourselves, and promotes overall well-being."

I have always been a strong believer in outdoor education and the need to be close to nature. Nature allows us to rediscover and recharge ourselves, and promotes overall well-being.

- Professor John Wang,
Physical Education and Sports Science
Academic Group, NIE



An Institute of



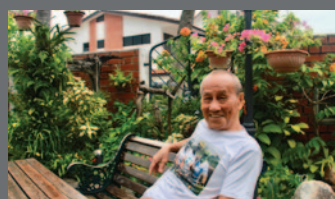
In this issue



Fostering a Sense of Place
through the Outdoors



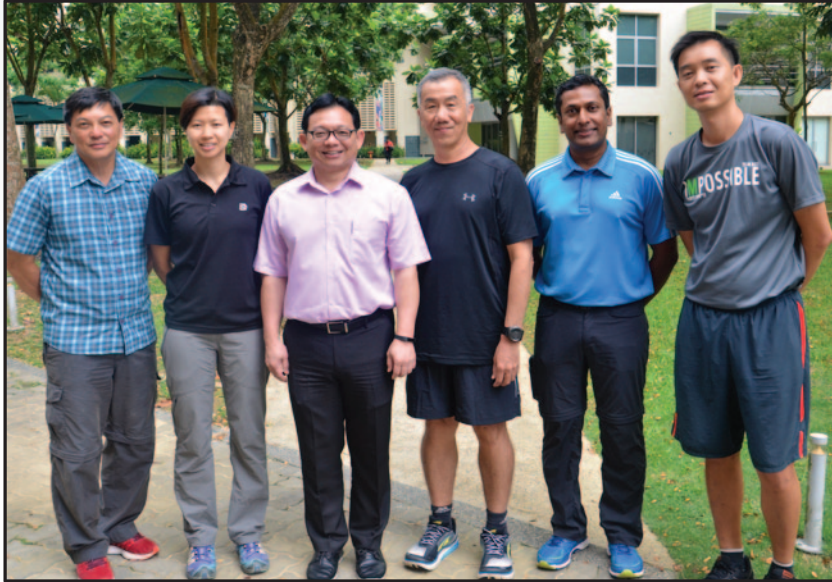
Nurturing Young and
Confident Leaders



Paving the Way, Leading by
Example

RESEARCH within REACH

Supported by  Marshall Cavendish
Education
www.mceducation.com



From left: Tay Kim Seng, Sherlyn Goh, Professor John Wang, Tan Boon Seng, Dr Saravana Pillai Arjunan and Loh Kee Seng.

Besides building physical fitness and promoting well-being, outdoor educators agree that meaningful interactions with nature can help students develop the values and competencies crucial for their personal, social and professional development in today's VUCA (volatile, uncertain, complex, ambiguous) world.

Dr Saravana Pillai, a teaching fellow from NIE who challenged himself to scale Everest this year, shares an example of how outdoor experience can develop our ability to cope with difficulties in life.

"Outdoor education mimics life at large. If you experience a problem, there may not always be people around to help, so you need to learn how to pick yourself up," he says. From the expedition, he learned the importance of educating youth about determination and perseverance, and how these are crucial for success in an ever-changing world. (Read about his expedition in the online version of *SingTeach*.)

Nurturing Cultured Citizens

Indeed, many schools today are pursuing character development through outdoor education. Instead of emphasizing the acquisition of outdoor skills, schools like Ahmad Ibrahim Secondary School (AISS) and Zhenghua Secondary School focus more on inculcating values and leadership through their outdoor programmes.

Mr Tan Boon Seng, Subject Head of Physical Education (PE) at AISS, shares: "My school started out with adventure-based programmes that focused on the outdoor experience and skills. Gradually, we progressed to character-building through outdoor education, and today, environmental education has also become an important component of AISS's outdoor programme."

"It is important to connect students to place, community and nature, so we should not overly focus on adventure activities," explains MOE Senior Specialist in Outdoor Education, Mr Tay Kim Seng. "There are many other aspects to outdoor education such as education for sustainability and nature-based education."

As schools embrace the richness of outdoor experiences, what is emerging is an effort to connect students to nature and the environment, to cultivate in them an appreciation for different places, or what is also termed "sense of place". (Read "Fostering a Sense of Place through the Outdoors" in this issue.)

"The idea is to encourage students to start caring about the environment and the world around them through environmental education," says Mr Loh Kee Seng, Head of Department (Physical Education & CCA) at Bedok Green Secondary School. "It is about nurturing cultured citizens. Sense of place is a tool to facilitate learning as we embark on this journey."

Being Comfortable with Discomfort

However, getting youth to be actively involved in outdoor activities is not easy, many educators say. From video game consoles to smartphones, a plethora of reasons exist as to why today's youth may prefer to stay indoors.

To encourage participation in outdoor pursuits, educators must first help students overcome their reservations and get comfortable with the idea of being outdoors. "For kids to get comfortable, they must enjoy the experience," says Kim Seng.

He notes that while many tend to perceive outdoor learning as largely adventurous and thus carrying a certain degree of risk, outdoor education does not necessarily entail physically strenuous activities. It can also include nature-related activities such as bird-watching or

Reference

Ng, C. M. (2016, April 8). MOE FY 2016 Committee of Supply Debate - Speech by Acting Minister for Education (Schools) Ng Chee Meng. Retrieved from <https://www.moe.gov.sg/news/speeches/moe-fy-2016-committee-of-supply-debate---speech-by-acting-minister-for-education-schools-ng-chee-meng>

looking for otters in the park. Such activities are not physically demanding, and offer equally beneficial learning experiences.

“So when we say we want students to ‘experience discomfort’, we don’t mean for them to be completely out of their comfort zone,” says Kim Seng. Instead, outdoor education aims to help individuals become comfortable enough to *want* to embark on an outdoor activity despite knowing that there might be potential discomfort.

Encouraging Student Participation in Outdoor Activities

Educators say it is a challenge to get students to actively participate in outdoor activities, and they have had to come up with various creative strategies to encourage participation.

“My school’s approach is to emphasize the ‘feel good factor’ of outdoor education,” shares Boon Seng. This includes simple gestures such as giving students constant encouragement and talking to their parents to allay their concerns. “We also ensure that the outdoor experiences, while challenging, are also fun and provide opportunities for positive learning experiences through achievement.”

Another method used by Zhenghua Secondary School is to involve students in the planning of the activity itself. “The time and effort invested in organizing a camp gives students a sense of ownership and responsibility, and in turn encourages them to participate,” says Head of the PE Department, Ms Sherlyn Goh. (Read “Nurturing Young and Confident Learners” in this issue.)

Making Outdoor Education a Part of Life

With these efforts to encourage students to get outdoors more often, educators hope to see students being comfortable outdoors and adopting a healthy lifestyle over the weekends.

“If we observe many people cycling and camping outdoors, we know we have done a good job,” says Boon Seng. “But more than just that, we should also encourage our students to influence their parents to spend time outdoors.” Free and unstructured outdoor play as a family can strengthen bonds, whether it is gardening, having a picnic, or simply relaxing in the backyard.

Ultimately, the value of outdoor education lies not only in promoting physical fitness but preparing students for life. “Outdoor education can build resilience and help kids learn to deal with failure, an essential trait for future success,” says Professor Wang. He therefore hopes that more outdoor programmes can look beyond teaching outdoor skills to focus more on character development, and challenge students in a variety of ways to bring about meaningful learning.

John Wang is Professor and **Saravana Pillai Arjunan** is Teaching Fellow, both from the Physical Education & Sports Science Academic Group at NIE. **Tay Kim Seng** is Senior Specialist (Outdoor Education) at the Ministry of Education, Singapore. **Loh Kee Seng** is Head of Department (Physical Education & CCA) at Bedok Green Secondary School. **Tan Boon Seng** is Subject Head of Physical Education at Ahmad Ibrahim Secondary School. **Sherlyn Goh** is Head of Department (Physical Education) at Zhenghua Secondary School.

Research

Fostering a Sense of Place through the Outdoors

A common perception among teachers and parents is that outdoor learning focuses largely on adventure activities that carry a certain degree of risk.

Extending outdoor education to the wider school community while mitigating this negative perception requires a deeper look into the philosophies behind outdoor education and how it can lead to real, authentic learning for students.

Kayaking, hiking and mountain-climbing—these are some activities that come to mind when one thinks of outdoor education. However, outdoor education is more than just participation in such adventures.

Reflective and Experiential Learning

According to Mr Tay Kim Seng, Senior Specialist (Outdoor Education) at the Ministry of Education (MOE), one of the key philosophies behind outdoor education as espoused by John

We need to help our children be more inquisitive about the environment.

- Tay Kim Seng on the need to look beyond the adventure aspect of outdoor education



Beyond participating in outdoor activities, Kim Seng believes it is important that students reflect on their experiences in order to learn.

Getting kids to learn more about places, people and the natural world helps us to educate for the larger aim of sustainability.

- Kim Seng on why it is important to develop students's awareness of their surroundings

Dewey is that of experiential education: providing an educative experience rooted in real world situations. Dewey's philosophy further suggests that if students do not reflect on their own learning and apply the learning into future situations, the experience may not be educative.

"To make an experience educative, it is not enough to just expose students to outdoor activities," says Kim Seng. "We need to bring them to the next stage of reflecting on what they have been experiencing in order for them to learn. This is a critical aspect of experiential learning."

Place-based Learning

One way educators can emphasize reflection during outdoor activities is through place-based learning. While outdoor education is invariably about the acquisition of outdoor skills through adventure activities, it should not neglect the insights and knowledge that students can gain from the outdoor spaces themselves, says Kim Seng.

His research centres on the concept of place-based learning, which seeks to help students develop an awareness, sensitivity and concern for the environment.

By incorporating place-based learning into the outdoor education curriculum, teachers can create more authentic learning experiences for their students. "Getting kids to learn more about place, people and the natural world helps us to educate for the larger aim of sustainability," he explains. "It also leads to community-based learning and citizenship education."

Gaining Both Skills and Knowledge

To implement place-based learning, a fundamental question about outdoor education the teacher should ask is: What does the place have to offer in terms of opportunities for student learning? Instead of treating a place as a mere "backdrop" to an activity, immersion into different environments can help students become more aware of places, people, and develop curiosity about their surroundings.

He cites an example of how a school trip to Kota Tinggi in Malaysia can be a valuable opportunity for students to learn about the significance of a place.

"There was one school that brought their students on a kayaking activity at the Johor River in Kota Tinggi and many of these students did not know that a large part of our water supply from Johor River is treated there." Such a situation, for Kim Seng, opens up the opportunity for students to learn about the historical significance of Kota Tinggi and the water scarcity problem Singapore faces.

"There are many potential learning opportunities when you combine place-based learning with adventure learning, so the focus shouldn't just be kayaking," he adds. "We need to help our children be more inquisitive about the environment."

In this case, place-based learning could also involve students interacting with the people living along the river bank to better understand real world issues such as water scarcity and environmental degradation.

Education for Sustainability

With challenges such as climate change facing us, Kim Seng hopes that outdoor education will eventually be more broad-based to include environmental education and education for sustainability.

"In Outward Bound Singapore (OBS), they teach our students to adhere to the 'leave no trace' principles to protect our natural spaces, but education for sustainability goes beyond

that,” he says. “We need to educate our students on the scarcity of natural resources and the need to live sustainably on a daily basis. Place-based learning is one approach to do this.”

One way to practise sustainable living is to start with the classroom. By fostering a sense of attachment to a place—in this case, the classroom—students naturally learn to conserve energy (by switching off the lights) and keep the classroom clean (by picking up litter on the ground), among other things.

“At the primary school level, we encourage teachers to start in the classroom and school backyard. At the secondary level, we encourage them to bring students out to a local park and community where they can learn more about the environment and people,” he says. “Given the importance of education for sustainability, outdoor education can play a more prominent role in preparing students for the issues confronting us today.”

Tay Kim Seng is Senior Specialist (Outdoor Education) at the Ministry of Education (MOE), Singapore. A former Physical Education teacher, he is passionate about promoting reflection and authentic learning.

Classroom

Nurturing Young and Confident Leaders

Many regard leaders as individuals who can motivate or guide others to achieve positive outcomes. A teacher at Zhenghua Secondary School, however, believes leadership is not just about leading others, but also about moving out of one’s comfort zone. She shares with us how the school’s outdoor education curriculum gives students the space to develop themselves and realize their leadership potential.

For Ms Sherlyn Goh, Head of Department (Physical Education) at Zhenghua Secondary School, leadership is not just about one’s competence or the ability to inspire others.

In fact, leadership starts with the individual and effective leaders have a growth mindset—striving to go beyond personal limits to achieve the best possible outcomes. Sherlyn believes that this mindset can be cultivated through physical and outdoor education.

A Growth Mindset

“Outdoor education often lends itself to situations that test students’ resilience or call on them to work with their peers. These challenging situations may also compel students to face up to their own fears and expectations,” says Sherlyn.

Nonetheless, such challenges can be opportunities for students to stretch their potential and grow, as long as they do not shy away from them.

“It is up to students to overcome the challenges they face and make the best of the experience,” Sherlyn adds. “If they attend an adventure camp or outdoor expedition with the mindset that they will tackle challenges head-on and maximise the learning experience, they will achieve personal growth.”

To give students room for personal growth, Zhenghua Secondary School provides opportunities for them to take ownership of their own learning through the school’s signature programme in outdoor education—student-led adventure camps.

Student Ownership over Outdoor Programmes

A key feature of Zhenghua Secondary School’s outdoor education curriculum is the adventure camps that students plan for and participate in at Secondary 1 and 3. “The



Sherlyn has found that getting students involved in the planning stages of outdoor activities can boost interest and engagement.

Outdoor education often lends itself to situations that test students' resilience or call on them to work with their peers. These challenging situations may also compel students to face up to their own fears and expectations.

- Sherlyn Goh on how outdoor education offers opportunities for personal growth

school has run both camps for 5 years and does not engage an external service provider to administer the activities," Sherlyn shares. "In fact, our students plan and conduct these camps while teachers play a facilitative role."

For the Secondary 1 camp, student leaders from Secondary 2 and 3 plan and administer the activities while juniors play a participatory role. At the Secondary 3 level, students come together to organize and implement their own class expeditions.

Every Secondary 3 student contributes to one aspect of the outdoor expedition and students get to join a committee that is aligned with their respective strengths. While students with outgoing personalities often gravitate towards the route planning or operations committee, others may choose to join the photography or finance committee.

Sherlyn acknowledges that while both teachers and students have to commit more time and effort in order to bring both camps to fruition, the results are rewarding.

"Involving students in the entire process from conceptualization to execution gives them greater ownership over these camps," explains Sherlyn. "They would also develop a better appreciation of the value of these outdoor education programmes."

Beyond that, the planning and execution of these camps also gives students the opportunity to take up leadership roles.

Bringing out the Leader in Every Student

Sherlyn believes there are two kinds of leaders that students can be—leaders of peers and leaders of self. The former refers to those who are effective decision-makers and demonstrate the ability to inspire others. The latter concerns those who are resilient and persevere through challenges.

Although many can envision the confident and outgoing student leading a group during an outdoor expedition, it cannot be presumed that introverted students necessarily lack leadership skills.

"In fact, the quieter students may be the very ones supporting their classmates who struggle to keep up with the group during an outdoor expedition," Sherlyn shares. "In doing so, they exemplify their ability to lead a peer."

Furthermore, Sherlyn and her colleagues have also observed that many average students are actually innate leaders. "When faced with a challenging situation during an adventure camp, the leadership qualities of these students can shine through," Sherlyn explains.

For those already in leadership positions, an outdoor educational experience can help to build up their confidence and strengthen their leadership capabilities.

"I once taught a rather shy student, who was tasked with leading the class outdoor expedition by virtue of being the class chairperson. After the expedition, I noticed that he became a more confident person and his classmates were more receptive to him," recounts Sherlyn.

Developing Environmental Consciousness

Sherlyn's department has received encouraging feedback from students and witnessed positive student outcomes from the two camps—these motivate them to continue running the outdoor programmes for future cohorts.

Nonetheless, in order for future generations to enjoy the same outdoor experiences, today's students must understand the importance of protecting outdoor spaces and develop a sense of responsibility for the environment.

"Many children of today are somewhat disconnected from the environment as they spend much of their time indoors and are also preoccupied with their electronic gadgets," explains Sherlyn. "We hope that outdoor education will help to sensitize students to the environment and foster an appreciation for outdoor sites."

If today's students feel a sense of attachment to the environment and are able to lead efforts in protecting outdoor spaces, future cohorts of students can also benefit from the same sites and enjoy similar outdoor educational experiences as them.

Sherlyn Goh is Head of Department (Physical Education) at Zhenghua Secondary School and has been a PE teacher for 14 years.

Paving the Way, Leading by Example

A pioneer in outdoor education, Mr Robert Tan is behind some of the first public sporting activities in Singapore and has contributed to shaping the Physical Education (PE) syllabus in schools. Now 77, he has lost none of his passion and vigor for sport, and continues to inspire through physical feats of endurance. He shares the story of how he got into PE, the work he has done over the years to promote outdoor activities, and his belief in the power of sport to enrich lives.

Humble Beginnings

Having grown up in the countryside, Robert Tan remembers his childhood as “nothing but play”. In fact, the former Director of Sports Excellence at the Singapore Sports Council did poorly throughout school and barely passed his final exams to graduate.

He shares: “I failed throughout until my father passed away right before I took my final exams. Maybe that woke me up, and I managed to pass my exams in the few subjects I took—Religious Knowledge, Art and Health Science.”

Given his educational background, Robert’s foray into Physical Education as a career seems almost a happy accident. After working as a mining labourer in Malaysia, he landed a job as a trainee teacher at the Teacher’s Training College (TTC). He recalls, “At TTC, you had to take a principal subject. I could not do English, Math or even Science, but I saw one—PE—that suited me because I was a *Kampong* boy. I was so happy.”

Little did he know, back then, that this would be the beginning of a prominent career in sports and physical fitness. Robert did so well in the course at TTC that he won a scholarship to further his studies in Physical Education at the University of Leeds. Before furthering his studies, he taught PE for 8 years at a primary school and 2 years at a secondary school.

He explains that his stint at the primary school was pivotal in awakening his passion for PE.

“Teaching at the Jalan Eunos School transformed me,” he says. “I blossomed under the guidance of the principal who was someone I really admired. Although I was nobody of significance then, she made me feel that my ideas for PE were valued.”

Laying the Foundation for Physical Fitness

After completing his studies, Robert brought his expertise, enthusiasm and desire to contribute to the Ministry of Education’s new Extra-Curricular Activities Centre (ECAC), where he was instrumental in introducing outdoor activities in schools and setting up the Junior Sailing Club in 1973. Later, he joined the newly created Singapore Sports Council (SSC). It was here that he laid the foundations for the pursuit of a physically active and healthy lifestyle for all Singaporeans.

“I started out as a Senior Sports Officer (Planning) at SSC and was responsible for promoting outdoor physical activities,” he says. “I was inspired after reading that in Scandinavia, there were fitness stations along jogging tracks where people could do strengthening exercises while they jog, so I built the first fitness corner at MacRitchie Reservoir Park. It was constructed with logs as I wanted it to be rustic.”

In the mid-70s when jogging and aerobics were the craze, he seized the opportunity to motivate more Singaporeans to pick up jogging as a sport by introducing the National



“Outdoor education provides valuable opportunities for learning through self-discovery. ... It is not a matter of teaching students to rock-climb or canoe well. Rather, the idea is to train them not to give up so easily in the face of difficulty.

- Robert Tan on how outdoor activities can build character

Aerobic Fitness Award (NAFA) as a way for people to evaluate their aerobic fitness. Adapted from the standards set out in the well-known Cooper test, NAFA became extremely popular as participants could win badges if they did well in the 2.4-kilometre jog.

“I contacted Kenneth Cooper, who is widely known as the father of aerobics, to ask for permission to adapt his test for use in Singapore, and he agreed,” says Robert. With the then Head of the Sports Science Centre at SSC, Dr Giam Choo Keong, who initiated the project, he continued to improve the test, eventually creating the National Physical Fitness Award (NAPFA), a test for all-round fitness, in 1982.

Helping Students Learn to Love the Outdoors

That NAPFA is still being used in schools today is testament to the value of Robert’s contribution. Yet despite setting the benchmark for physical fitness in schools, he believes there is more to fitness than just doing well in NAPFA. To him, an outdoor component in PE is essential to help students develop the skills and attitudes needed to live meaningful lives.

“Outdoor education provides valuable opportunities for learning through self-discovery,” he says. “It is not a matter of teaching students to rock-climb or canoe well. Rather, the idea is to train them not to give up so easily in the face of difficulty. The motto of Outward Bound School (OBS), ‘to serve, to strive and not to yield’, reflects this focus.”

While the pursuit of sporting excellence has its place, for the majority of students, Robert feels it is more important to help them enjoy sporting activities so that they continue participating in them even after leaving school. As such, he is happy to see the teachers he trained in TTC establishing outdoor activities in schools and Junior Colleges, and more concerted efforts to let students experience outdoor education through OBS camps.

“Instead of always just striving to win, I want to see students enjoying the great outdoors and, through that, forge friendships and gain memorable experiences,” he says. “In this way, we can foster a love of the outdoors from young.”

It’s Not Just a Destination, It’s a Way of Life

Now a retiree, Robert continues to exemplify this belief that outdoor pursuits can and should continue outside of formal education. Through years of engaging in outdoor activities and challenging his limits, he has shown that age is no barrier to feats of physical prowess.

In 2016, at the age of 76, he walked 800 kilometers to complete a trek called the Camino de Santiago, a network of walking routes across Spain. This involved walking 20 to 30 kilometres a day for 38 days in unfamiliar terrain and climate. 2 years earlier, he cycled from Bangkok to Singapore via the Gulf of Thailand and the East Coast of Malaysia with two friends, covering 2,000 kilometres in 21 days.

Just as his physical accomplishments are awe-inspiring and stereotype-breaking, so too are Robert’s pioneering efforts in physical education and outdoor learning lessons in taking a leap and challenging ourselves. As Abraham Maslow once said, “At any given moment, we have two options: To step forward into growth or to step back into safety.” In choosing the former like Robert, who exhibits courage and initiative in all his undertakings, we may discover we are capable of more than we thought.

Robert Tan was Specialist Inspector of Schools (Physical Education) at MOE in the 1960s. He joined the Singapore Sports Council (SSC) as a Senior Sports Officer (Planning) in the early 1970s and went on to become the Director in Sports Excellence from 1995-2000. On 1 April 2014, SSC was renamed Sport Singapore.

Copyright © 2018

SingTeach is an e-magazine of the Office of Education Research, National Institute of Education, Nanyang Technological University, Singapore

Online Exclusives



Creating Meaningful Outdoor Learning Experiences



A Classroom Without Walls



Outside the Classroom, Into the Field



Equipped for Everests



3 Ways to Make Sports Day Engaging for Every Student